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PAPER NO. 17

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Yoshimura et al.

D.Jacobson
Filed 3/30/89

Before the Board of Appeals

94-0757

Gerald M. Murphy, Jr.
for Appellants

Supplemental
Examiner's Answer

Form PTOL - 84 (Rev. 5 - 81)
U.S. GPO: 1980-259-281

SUPPLEMENTAL EXAMINER'S ANSWER

This is in response to appellant's reply brief on appeal filed 2/11/93. The reply brief has been entered into the present application.

Appellants address the following main issues in response to the Examiner's answer: (1) That claims 9 and 11-19 do not stand or fall together; and (2) That the protein described by Valente et al. is distinct from the protein claimed by applicants.

These arguments have been fully considered but are not deemed to be persuasive for the following reasons.

(1) Claims 9 and 11-19 are drawn to a cDNA encoding a monocyte chemoattractant peptide, a recombinant vector containing said cDNA molecule, microorganisms containing said vector, and a method of producing the chemoattractant peptide. Appellants assert that each of the claims is distinct from the other and, as such, do not stand or fall together. It has long been the practice of the Patent Office to examine DNA encoding a protein of interest, vectors, host cells containing the vector, and methods of producing said protein together because each of these elements has been deemed to be patentably indistinct from the other, regardless of the source of DNA or expression system. Therefore, claims 9 and 11-19 stand or fall together.

(2) Claims 9 and 11-19 are rejected under 35 U.S.C. 103 as being unpatentable over Valente et al. Appellants' reply brief states that appellants do not dispute that two different methods are used to ascertain the molecular weight of the claimed factor and the protein described by Valente et al. It is noted that appellants' appeal brief, pages 11-12, clearly

argues that the protein of Valente et al. is distinct from appellants' protein on the basis of molecular weight alone. Appellants make no mention of the fact that different methods of size determination are compared, i.e. SDS-PAGE vs. calculations based on amino acid composition. In fact appellants state, "The present inventors have definitively differentiated their protein from the prior art of Valente, which has a molecular weight of 14,500 daltons." (Appeal brief, pages 11-12) Therefore, appellants have clearly argued that the protein of the present invention is distinct from Valente et al. on the basis of molecular weight alone, without mentioning the fact that the sizes of said proteins were determined using different methods.

Additionally, appellants assert that the method used to determine the molecular weight of the claimed factor is not amino acid composition. In response, it is noted that the specification states, "Based on the amino acid composition, our estimate of the molecular mass of GDCF is 8400 daltons (page 23, lines 1-2)." In addition, Yoshimura et al. (J. Immunol. 142:1956-1962, which is appellants' own work), clearly teaches that the molecular weight of LDCF-1 and LDCF-2 was calculated based upon "amino acid composition" (page 1959, column 1). Thus, appellants' assertion that the molecular weight of the protein of the present invention as determined to be 8400 Da, based upon amino acid composition, is not understood because they have stated in two separate places that molecular weight was based upon amino acid composition.

Appellants also argue that the examiner is implying that the protein isolated by Valente et al. may be two distinct proteins and that it would not be obvious from the reference which of the two proteins would possess chemotactic activity. Referring to the specification, appellants state that GDCF-1 and GDCF-2 are "virtually identical molecules but that the N-terminus of GDCF-1 may contain an additional residue and/or a different N-terminal post-translational modification." (page 38, lines 1-3) Therefore, appellants teach that GDCF-1 and GDCF-2 are essentially the same protein

with minor differences at the amino terminus. One could assume that the protein isolate of Valente et al. might, in fact, contain two different proteins also, just as appellants' isolate did. This is not important, however, because, as appellants have pointed out, the claims are directed to only one protein, GDCF-1. The claimed polypeptide may in fact be the same as the protein of Valente et al. because appellants have failed to demonstrate otherwise. Appellants' GDCF-2 has approximately the same pI and molecular weight as the Valente et al. protein and thus is deemed to be the same. In addition it is noted that appellants have stated in the specification that MCP-1 (which is GDCF-2) has the same amino acid composition and that DNA encoding MCP-1 hybridized to DNA encoding the protein of Valente et al., thus showing that the proteins appear to be identical. (See page 45, lines 8-16) Claims 9 and 11-19 are thus deemed to be obvious in view of Valente et al.

CONCLUSION

For the above reasons, it is respectfully submitted that the rejection is correct and proper and that the rejections should be sustained. This supplemental examiner's answer contains no new points of argument and appellants are thus not entitlted to file a new reply brief.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dian C. Jacobson whose telephone number is (703) 308-2973. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

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